

CLAIMS

1. A personal alarm signalling device adapted to be worn on a user's body comprising a user activatable transceiver means for transmitting an alarm signal to a responder device, wherein the transceiver means is adapted to receive a response signal from the responder device in response to the alarm signal, and the alarm signalling device further comprises a user display means to display the response signal to the user.
2. A device according to claim 1, wherein the responder device is adapted to contact outside help such as aid services.
3. A device according to claim 1 or 2, wherein the signalling device comprises interface means for receiving user data, said transceiver means being adapted to transmit the user data to the responder device after receipt of the response signal.
4. A device according to claim 3, wherein the interface means comprises a sound receiving member.
5. A device according to claim 3 or 4, wherein the transceiver means is adapted to receive responder data from the responder device, the interface means being adapted to provide the responder data to the user.
6. A device according to claim 5, wherein the interface means comprises the display means.
7. A device according to claim 5 or 6, wherein the display means is adapted to display the responder data.
8. A device according to any of claims 3 to 7, wherein the

user data comprise the user's voice and/or data relating to the user's physical condition.

- 5 9. A device according to any of preceding claims, wherein the transceiver means comprises signal channel selection means for selecting a frequency or channel at which the transceiver means transmits the alarm signal.
- 10 10. A device according to claim 9, wherein the transceiver means is adapted to receive a channel control signal from the responder device for controlling the signal channel selection means.
- 15 11. A device according to any of the preceding claims, wherein the user display means comprises a visual display member and/or an audible display member and/or a tactile display member.
- 20 12. A device according to any of the preceding claims, wherein the device comprises a range monitoring means for monitoring the range between the alarm signalling device and the responder device.
- 25 13. An alarm signalling device according to claim 12, wherein the range monitoring means are adapted to activate the user display means if the signalling device is out of the range of the responder device.
- 30 14. An alarm signalling device according to claim 13, wherein the range monitoring means are activatable by the user.
- 35 15. An alarm signalling device according to any of the preceding claims, wherein the transceiver means is adapted to transmit an identification code to identify the alarm signalling device from multiple alarm

signalling devices.

- 5 16. An alarm signalling device according to any of the preceding claims, wherein the alarm signalling device is adapted to remotely operate devices such as doors and appliances.
- 10 17. An alarm system comprising an alarm signalling device according to any of the preceding claims.
- 15 18. An alarm system comprising an alarm signalling device according to any of claims 1 to 16 and a responder device for receiving an alarm signal from the alarm signalling device, the responder device comprising means for signalling an alarm.
- 20 19. An alarm system according to claim 17 or 18, wherein the alarm signalling means comprises a visual alarm and/or audible alarm.
- 25 20. An alarm system according to any of claims 17 to 19, wherein the alarm signalling means comprises telephone dialling means for contacting outside help such as emergency services and/or telephone services.
- 30 21. An alarm system according to any of claims 17 to 20, wherein the responder device is connected to the telephone network.
- 35 22. An alarm system according to any of claims 17 to 21, wherein the alarm signalling device comprises signal channel selection means for selecting the frequency or channel for transmitting the alarm signal and the responder device comprises responder channel selection means for selecting the channel for receiving the alarm signal.

23. An alarm system according to claim 22, wherein the responder device is adapted to transmit a selection signal for controlling the signal channel selection means.
24. An alarm system according to claim 23, wherein the responder device is adapted to control the signal channel selection means in response to a reduced signal quality on the selected channel.
25. An alarm system according to any of claims 22 or 23, wherein the responder channel selection means continuously or periodically transmits a channel monitoring signal for monitoring the quality of the transmission channel or frequency.
26. An alarm system according to any of claims 17 to 25, wherein the responder device comprises audio representation means to represent the telephone connection.
27. An alarm system according to any of claims 17 to 26, wherein the responder device comprises telephone answering means for enabling the user to answer calls via the alarm signalling device.
28. An alarm system according to any of claims 17 to 27, wherein the system may comprise means for monitoring the range between the transceiver device and the responder device to prevent the transceiver device from being out of range.
29. An alarm system according to any of claims 17 to 28, wherein the system comprises identification means for identifying an alarm signalling device.

- 5 30. An alarm system according to claim 29, wherein the system comprises one or more responder devices and one or more alarm signalling devices, the responder device signalling an alarm signal which corresponds to the identified alarm signalling device.
- 10 31. An alarm system according to any of claims 29 or 30, wherein the system comprises an alarm procedure storage means for storing alarm procedures for each alarm signalling device, the alarm signalling means signalling an alarm in accordance with the alarm procedure for the identified alarm signalling device.
- 15 32. An alarm system according to any of claims 17 to 31, wherein the system may comprise means for locating the position of the alarm signalling device.
- 20 33. An alarm system according to any of claims 17 to 32, wherein the system comprises user health record storage means for storing user health records, the system further comprising means for monitoring health data, the health monitoring means activating the responder if the user health data deviate from the user health records.
- 25 34. An alarm system comprising an alarm signalling device having a transceiver means and a responder device for receiving an alarm signal from the transceiver means, the responder device comprising means for signalling an alarm, the transceiver means comprising interface means for receiving user information and activating means for activating transmission of the alarm signal in response to the user information, the transceiver means further comprising control means for controlling the activating means in response to the user health data.
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35. An alarm system according to any of claims 17 to 34,  
wherein the responder device is adapted to receive  
incoming telephone calls and the interface means are  
adapted so that the user answers the calls via the  
interface means.

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36. A method of receiving an alarm signal from an alarm  
signalling device according to any of claims 1 to 16 by  
means of an alarm system according to any of claims 17  
to 35.

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37. A method of receiving an alarm signal from a user  
comprising the steps of:

providing an alarm system comprising an alarm signalling  
device and a responder device for receiving an alarm  
signal from the alarm signalling device, the responder  
device comprising means for signalling an alarm, the  
alarm signalling device comprising a user activatable  
transceiver means for transmitting an alarm signal to a  
responder device, wherein the transceiver means is  
adapted to receive a response signal from the responder  
device in response to the alarm signal, and the alarm  
signalling device further comprises a user display means  
to display the response signal to the user,

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the method further comprising the steps of  
the responder transmitting the alarm signal in response  
to the activated signalling device, and the user display  
means representing activation of the alarm signal by the  
responder device.

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38. A method according to claim 36 or 37, wherein the  
responder device is adapted to contact outside help  
directly such as aid services.

39. A method according to any of claims 36 to 38, wherein  
the alarm signalling device comprises interface means

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for receiving user data, the transceiver means being adapted to transmit the user data to the responder device after receipt of the response signal.

- 5     40. A method according to any of claims 36 to 39, wherein the user data comprise voice data and/or user health data.
- 10     41. A method according to any of claims 36 to 40, wherein the responder means comprises dialling means for dialling emergency services.
- 15     42. A method according to any of claims 36 to 41, wherein the dialling means are adapted to continue dialling until an emergency service is contacted.
- 20     43. A method according to any of claims 36 to 42, wherein the user communicates with the emergency service via the interface means.
- 25     44. A method according to any of claims 36 to 43, wherein the transceiver means comprise signal channel selection means for selecting the frequency or channel for transmitting the alarm signal and the responder device comprises responder channel selection means for selecting the channel for receiving the alarm signal, the responder device controlling the signal channel selection means in response to a reduced signal quality and/or interference on the selected channel, the method comprising the step of selecting a different channel if
- 30     the transmission quality is reduced.
- 35     45. A method according to any of claims 36 to 44, wherein the responder device continuously or periodically transmits a selection signal to monitor the transmission quality of the transmission channel or transmission

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frequency.

46. A method of receiving an alarm signal from a user comprising the steps of providing an alarm system comprising:
- a responder device for receiving an alarm signal from one or more alarm signalling devices,
  - identification means for identifying each alarm signalling device,
  - a storage means for storing an alarm procedure for each alarm signalling device,
  - alarm signalling means for signalling an alarm in accordance with each alarm procedure,
- the method further comprising the steps of receiving an alarm signal, identifying the alarm signalling device, and signalling an alarm in accordance with the alarm procedure corresponding to the alarm signalling device.
47. A method according to claim 46, wherein the alarm signalling means comprises telephone dialling means for contacting one or more emergency services and/or telephone services in accordance with the alarm procedure.